

Contents

General Operating Procedures	page 2
Programming	
1 Decide line positions and lengths	page 5
2 Position glue guns	page 5
3 Position photohead	page 5
4 Enter data for constants	page 6
5 Enter glue pattern	page 13
6 Enter adhesive pressure settings	page 19
7 Purging guns	page 20
8 Run hold	page 21
9 Memory	page 21
10 Production information	page 23
11 Hidden constants	page 24
Rear Panel Diagram and Description	page 27

Before you begin to set up the MPC, read these instructions fully. Refer also to the MPC data sheet reference MPC 1.2 (6.97).

General Operating Procedures

The various functions of the Pafra MPC controller can be programmed one at a time for the selected channel 1 to 8. The current function is shown by one or more of the following lights and displays.

- 1 The function lights are single, round, yellow LEDs.
- 2 The **main display** window is the red, four-digit display.
- 3 The 'select channel' and 'pattern inspect/enter' windows are each a red, single-digit display.
- 4 The **information display** window is the green, 2-line "liquid crystal display" or LCD.

The current function value is displayed in the main display window and is set using the 'increase' or 'decrease' keys which immediately change the controller setting.

Data Lock

All current data is stored when the controller is switched off. When the controller is switched on, the data lock will prevent data being amended. Press 'data-lock' button to allow data to be changed.

Start-up Instructions

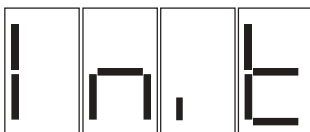
Before programming can commence, the MPC Controller must be turned on. The following sequence should be followed :

1. Check that the power supply to the controller is connected. The supply should be a switched 240VAC 13 amp single phase supply. This supply should also be clean and free from spikes.

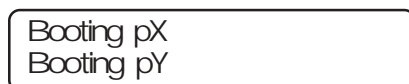
Prior to switching on the supply make sure that the power on/off switch on the front of the MPC is switched off.

2. Switch on the power supply at source.
3. Turn on the power to the MPC by pushing the rocker on the power on/off switch to ON.
4. When the power is turned on, the controller will perform a brief initializing procedure. This is a self-diagnostic and preparation program and is indicated on the front of the controller as follows :

The main display will show :



The information display will show :



5. Once the brief initialization program is successfully completed the MPC will revert to its standard programming default settings as shown below :

The 'select channel' window will show :
i.e. channel number 1

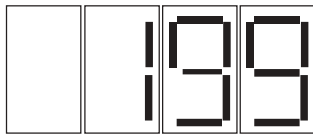


The 'pattern inspect/enter' window will show :
i.e. line number 1 in the pattern of channel 1

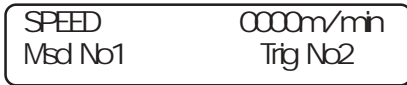


The 'delay' LED light will be lit.

The main display will show the current delay dimension in millimetres for line number 1 of channel 1.



The INFORMATION display will show :



6. To start programming press the 'data lock' button to turn off the data lock.

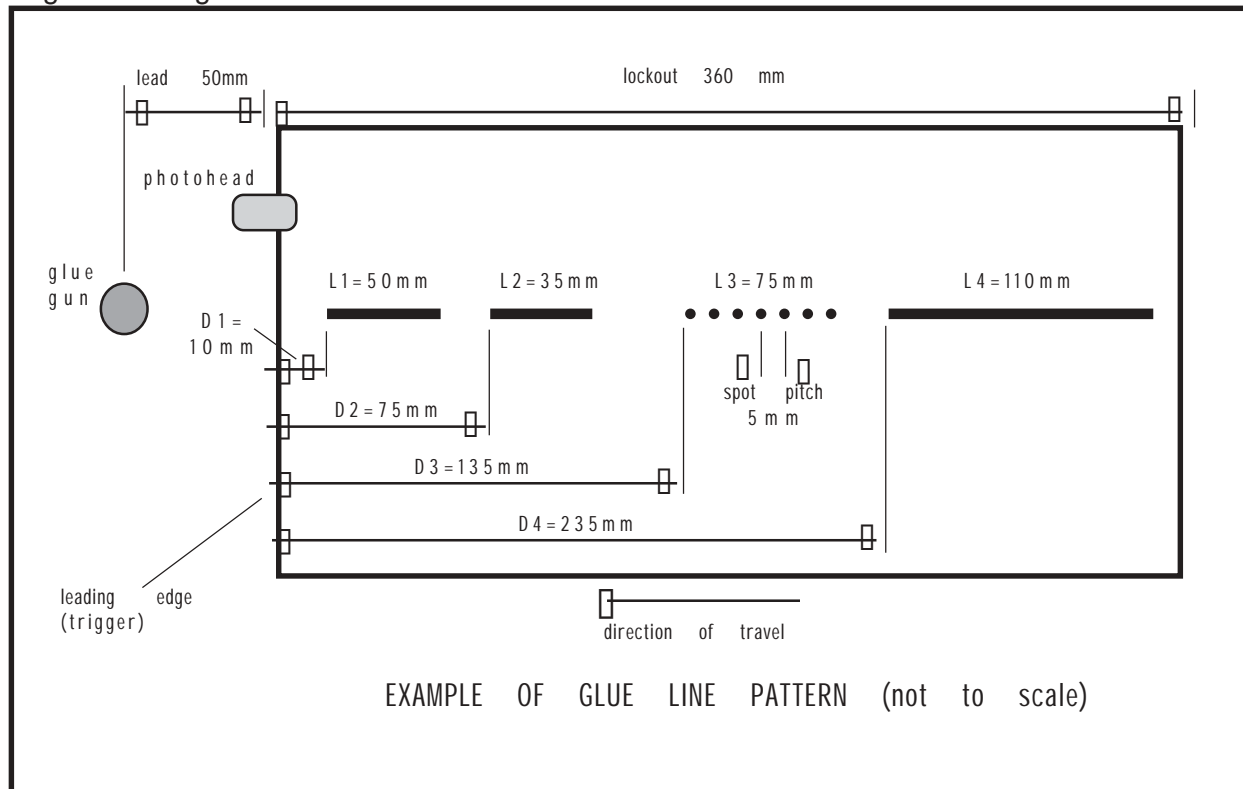
Programming

For best results, follow these steps in this order :

1. **Decide line positions and lengths**
2. **Position glue guns**
3. **Position photohead(s)**
4. **Enter data for all constants**
5. **Enter glue line pattern : delay position and line length**
6. **Enter pressure settings : standoff and slope**
7. **Purging or testing guns**
8. **Run hold**
9. **Memory**
10. **Production information**
11. **Hidden constants**

EXAMPLE (SEE DIAGRAM)

The following example will help you to get used to using the MPC controller. Follow this example through all settings.



1. Decide line position and lengths

Look at the work to be glued. Measure and note down the following :

1.1 The start position of the glue line or lines (maximum 8 lines)

Note : The start position of the glue line or lines is known as the delay and is referred to in the example as 'D'.

The delay distance for any line number is always measured from the trigger edge.

Example : The following delay information is correct :

Delay for line 1 (D1)	=	10 mm
Delay for line 2 (D2)	=	75 mm
Delay for line 3 (D3)	=	135mm
Delay for line 4 (D4)	=	235mm

1.2 Measure and note down the glue line lengths required.

Example : The following line information is correct :

Line length for line 1 (L1)	=	50 mm
Line length for line 2 (L2)	=	35 mm
Line length for line 3 (L3)	=	75 mm
Line length for line 4 (L4)	=	110mm

1.3 Changing lines to spots

Any of the lines can be converted to a series of spots. (See section 5.3).

Example : Line 3 (L3) spot pitch = 5mm

Note : For the spot pattern to finish exactly at the end of the line, the line length must be equally divided in whole numbers by the spot pitch. An allowance may be needed for the spot duration.

When a line is switched to spot mode the line length remains the master setting. Therefore, if the line length is not equally divisible by the pitch, the last spot may be left off and the line, which is made up of a row of spots, will appear short.

The spot pitch and spot time must be the same for all the lines in a particular pattern.

2. Position the glue guns

Example : only one glue gun is used.

3. Position the photohead(s)

The photohead must be positioned in the correct location to detect the trigger edge.

Example : The leading edge of the product is the trigger edge.

Position the photohead as follows:

- 50mm from glue gun towards feeder (this distance applies in most cases)
- 15mm above the surface of the work (maintain this focal length distance with guiding)
- so that the trigger edge passes under it
- over a gap in the machine or a dark, non-reflective surface

The trigger LED on the controller confirms when a trigger signal has been received.

You can select any of the following edges as the trigger edge:

- the leading edge of the product or one of its flaps
- the trailing edge of the product or one of its flaps

This can be any edge the photohead can clearly detect.

4. Enter data for all constants into the controller

Follow these steps to set the 'constants' for each channel :

Switch on the controller.

Channel 1 information will be displayed with the LED for 'Delay 1' lit and a value for 'Delay 1' shown in the 4 digit LED display.

Switch off 'data lock'.

To select a channel, press 'select channel'. All settings will apply to the channel selected.

To select constants, press the 'constants' key.

4.1 Lead

Enter lead distance. This is the distance in mm from photohead to glue gun - normally set at 50mm. When entered, this enables subsequent line delay and line length adjustments to be measured from the product leading edge.

Note : The lead distance you enter on the controller must equal the distance from the photohead to the glue gun. Therefore, always enter the new lead distance on the channel when you position or reposition the photohead or glue gun.

Example : Enter a lead distance of 50mm on channel 1.

Press 'increase' or 'decrease' until 50mm is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : Trigger (photohead number) is confirmed later in the constants.

4.2 Spot pitch

Press the constant key

Enter spot pitch. This is the repeat distance between the centre of one spot and the next.

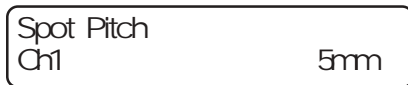
Example : To enter a spot pitch of 5mm on channel 1

Press 'increase' or 'decrease' until 5mm is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



4.3 Spot duration

Press the constant key.

Enter spot time (ms). The size of spot is controlled by the gun opening time. The value is displayed in milliseconds and is adjustable from 0.1ms to 50.0 ms in steps of 1/100 of a millisecond.

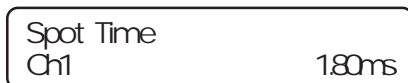
Example : spot time of 1.8 ms in channel 1.

Press increase or decrease until 1.8 ms is confirmed, as shown below.

MAIN DISPLAY



INFORMATION DISPLAY



Note : The value is dependent on several factors including type of gun, speed of machine, size of spot, viscosity of glue and distance of nozzle above the surface, etc., and can only be accurately set whilst the machine is running at production speed. Suggested starting figures are as follows :

Series 93 gun - enter 0.80 milliseconds

Series 22 gun - enter 1.80 milliseconds

4.4 On compensation

Press the constant key.

Enter 'on compensation time' (ms). This represents the response time of the gun.

The value is displayed in milliseconds and is adjustable from 0.00 ms to 50.0 ms in steps of 1/100 of a millisecond.

Example : On compensation time for channel 1 using Series 22 gun is approximately 4.0 ms.

Press 'increase' or 'decrease' until 4.0 ms is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : The 'on compensation' time is needed to keep the line start position consistent. This value is dependent on several variables including glue viscosity, nozzle size and the height of the gun above the surface.

Suggested settings for on compensation times are :-

Series 86	-	enter 11.00 ms.
Series 87	-	enter 7.00 ms.
Series 88	-	enter 8.50 ms.
Series 93	-	enter 3.00 ms.
Series 22	-	enter 4.00 ms.

4.5 Off Compensation

Press the constant key.

Enter 'off compensation time' (ms). This represents the off response time of the gun.

The value is displayed in milliseconds and is adjustable from 0.00 ms to 50.00 ms in steps of 1/100 of a millisecond.

Example : 'Off compensation time' for channel 1 using Series 22 gun is approximately 5.0 ms.

Press 'increase' or 'decrease' until 5.0 ms is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : You must enter the 'off compensation' time to keep the line end position consistent. Like the 'on compensation' value, the 'off compensation' is dependent on a number of variables.

Suggested settings for off compensation times are :-

Series 86	-	enter 6.00 ms
Series 87	-	enter 6.00 ms
Series 88	-	enter 6.00 ms
Series 93	-	enter 4.00 ms
Series 22	-	enter 3.50 to 6.50 ms depending on glue viscosity from 1 to 6 poise.

4.6 Trigger number

Press the constants key.

Enter trigger number. This assigns the trigger input number (1 to 4) to the selected channel.

Example : Using photohead connected to trigger input number 3 on rear panel of controller.

Press 'increase' or 'decrease' until 3 is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : The MPC has 4 photohead inputs available and each channel can be assigned one of the four photohead triggers. Therefore more than one channel can be assigned the same photohead trigger.

4.7 Trigger Mode

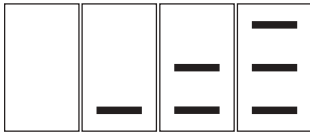
Press the constants key.

Enter trigger mode. This sets the trigger to sense either the front edge or rear edge of product.

Example : To enter front edge detection (dark to light) for trigger number 3 assigned to channel 1.

Press increase or decrease until “dark to light” is confirmed, as shown below.

MAIN DISPLAY



INFORMATION DISPLAY



Note : Two settings for photohead sensing are available using normal photohead setting methods.

Dark to light = front edge detection
Light to dark = rear edge detection

This setting will apply to all channels which have been assigned this trigger number. Changing this setting will affect all channels which have been assigned this trigger.

4.8 Lockout

Press the constants key.

Enter lockout distance. This means that the photohead assigned will be inhibited for the value shown after the initial triggering.

Example : Lockout equals product length 360mm.

Press 'increase' or 'decrease' until 360mm is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : Lockout is the distance from the trigger edge to the back of the product over which the photohead passes.

The lockout displayed will turn off the photohead for that distance. This will prevent unwanted triggering from holes in products or contrasting colours.

4.9 Msd number

Press the constants key.

Enter msd number. This assigns the msd number (1, 2 or internal timer) to the selected channel.

Example : Connect the msd to input number 1 on rear panel of controller.

Press 'increase' or 'decrease' to toggle between the options available until number 1 is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : The MPC has two MSD inputs available. Each channel can be assigned one of the two inputs. Therefore more than one channel can be assigned the same MSD input.

There is a third option also available. The internal timer can be used on slow, fixed speed machines where it is impossible to fit a conventional MSD. This internal timer generates 1ms pulses which equate to 1mm pulses at 60m/min. It is set in the same way using the increase or decrease key.

4.10 Msd mode

Press the constant key.

Enter msd pulse mode. This sets the msd signal to either 1 or 2mm.

Example : With msd5 set to 1mm.

Press 'increase' or 'decrease' to toggle between the two options available until 1mm is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY



Note : There are two MSD options available

MSD 4 - 2mm pulses

MSD 5 - 1mm pulses

4.11 Set or run mode

Press the constants key.

Enter 'set' or 'run' mode. Each channel can be set so that following a machine stoppage the control cycle will either reset (run) or continue the interrupted cycle (set).

Example : Run mode

Press 'increase' or 'decrease' to toggle between the two options available until RUN is confirmed.

MAIN DISPLAY



INFORMATION DISPLAY



Note : This function applies when a machine stops during a control cycle.

Set mode : In set mode the glue gun stops when the machine stops and starts again when the machine restarts to complete the current gluing cycle.

Run mode : In run mode the glue gun also stops when the machine stops but does not start again until the photohead detects a trigger to begin a new cycle.

4.12 Low speed cut out

Press the constants key.

Enter speed for low speed cutout. This is the machine speed below which the outputs are inhibited.

Example : Set for 10m/min.

Press 'increase' or 'decrease' until 10m/min is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY

Low Speed Cutout
Ch1 < 10m/min

4.13 Tip sealer control

Press the constants key.

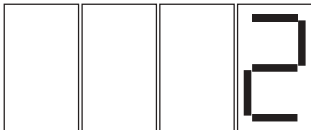
Enter tip sealer number. This assigns the tip sealer input identification number for the selected channel.

Example : Connect tip sealer input number 2 on rear panel of controller.

Note : Set switch to auto on rear of the controller.

Press 'increase' or 'decrease' to toggle through options available (1, 2 or none) until number 2 is confirmed, as shown below :

MAIN DISPLAY



INFORMATION DISPLAY

Tip Sealer No.
Ch1 Nb2

You have now completed all programming of the constant information for the selected channel.

Press 'constant' to scroll back to 'lead'

OR

Press 'select channel' to change the channel and repeat the above procedures for the new channel.

OR

Press 'pattern inspect/enter' to input the delay and line information for the channel selected.

5. Enter the glue line pattern

Follow these steps to set the delay and line length for each of the lines in the pattern. Up to 8 lines are available.

Note : the example has 4 lines.

Press the 'pattern inspect/enter' key. The pattern display will revert to the last selected delay or line.

5.1 To remove an existing pattern from a channel

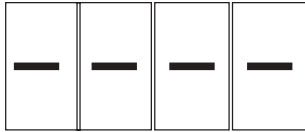
Press 'pattern clear'. Both the pattern number LED and the main display will flash.

To cancel the instruction press 'pattern clear'.

OR

To confirm the instruction to clear, press 'pattern inspect/enter'.

When the channel is cleared the following display will show :

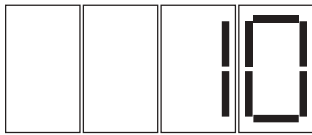


5.2 To input delay and line values

5.2.1 To input delay and line for line number 1

Press 'add line'. The pattern window will flash '1', the main display will show --- 1 and the delay light will be lit indicating the parameter to be set.

Press 'increase' until 10mm is shown.



example D1 = 10mm

Press 'add line'. The pattern window will continue to flash, the main window will show ---- and the line LED will illuminate indicating the parameter to be set.

Press 'increase' until 50mm is shown as below :



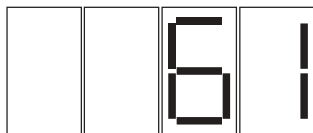
example L1 = 50mm

Press 'pattern inspect/enter'. The two parameters D1 and L1 will be accepted. The pattern window will show 1 and the delay LED will illuminate. The main window will show the value of the delay for line number 1 which is 10mm.

The input for delay and line values for line 1 of a pattern of 4 lines is now complete.

5.2.2 Input delay and line for line number 2

Press 'add line'. The pattern window will flash '2', the delay LED will light and the main display will show 61.



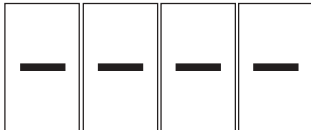
Note : The value displayed for delay 2 immediately jumps to 61mm. This is the minimum distance that delay 2 can be and is calculated as follows :- $D1 + L1 + 1$
 $10 + 50 + 1 = 61$

Press 'increase' until



example $D2 = 75\text{mm}$

Press 'add line'. The pattern window will continue to flash, the line LED will light and the main window will show - - - -



Press 'increase' until



example $L2 = 35\text{mm}$

Press 'pattern inspect/enter'.

The pattern window will show 2 and the delay LED will light. The main display will show the value for delay 2 which is 75mm.

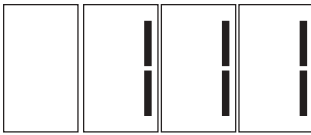


The input for delay and line values for line number 2 of a pattern of 4 lines is now complete.

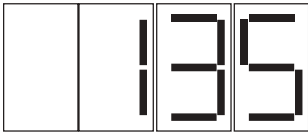
5.2.3 Input delay and line values for line number 3.

Note : This line is formatted as spots. First the line must be entered as a line and then converted to spot mode.

Press 'add line'. The pattern window will flash '3', the delay LED will light and the main window will show the minimum value for delay 3 which is 111mm in this example.

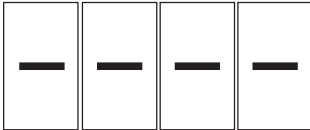


Press 'increase' until

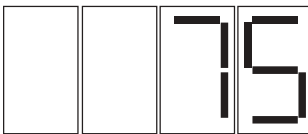


example D3 = 135mm

Press 'add line'. The pattern window will continue to flash, the main window will show — — — and the line LED will light.



Press 'increase' until



example L3 = 75mm

Press 'spotting mode'. Both the number in the pattern window and the line LED will flash.

Line 3 is now set for spotting.

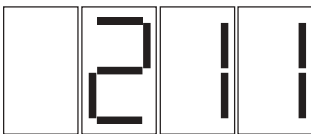
Press 'pattern inspect/enter'. The pattern window will show 3 and the delay LED will light. The main window will show the value for delay 3 which is 135mm.

The delay and line values for line number 3 are now complete, including setting for spot mode.

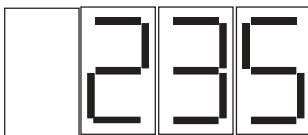
Note : The spot pitch and spot duration are set in the constants section for the selected channel. (See sections 4.2 and 4.3).

5.2.4 Input delay and line values for line number 4.

Press 'add line'. The pattern window will flash '4', the delay LED will light and the main window will show the minimum value of delay 4 which is 211mm.

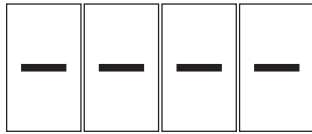


Press 'increase' until

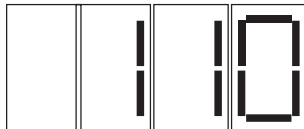


example D4 = 235mm

Press 'add line'. The pattern window will continue to flash, the line LED will light and the main window will show - - - -



Press 'increase' until



example L4 = 110mm

Press 'pattern inspect/enter'. The pattern window will show '4' and the delay LED will light. The main window will show the value of delay 4 which is 235mm.

The delay and line values for line number 4 are now complete.

5.3 Spotting mode

To put down a series of spots, first set a glue line in the position that the spots are required and then change this glue line to a series of spots.

Press 'pattern inspect/enter' key until the required LED is lit. Then press 'spotting mode' key : 'line' LED will flash and that line will now become a series of spots.

The spot size and repeat distance are set by moving to the constants and adjusting 'spot pitch mm' and 'spot time 1/10ms'.

Note : More than one glue line can be changed to spots but all the spotting lines for a particular channel must use the same spot size and spot pitch.

5.4 To amend an existing pattern

The 'pattern inspect/enter' key will also let you index through the pattern to view or make changes to an existing pattern.

Example : To change the delay dimension of line number 3.

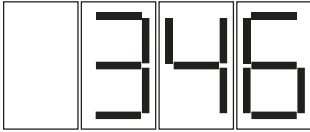
Press 'pattern inspect/change' repeatedly until delay 3 is selected.

Use the 'increase' and 'decrease' buttons to change the value.

5.5 To insert a line into an existing pattern

Example : Insert a new line into the example with a delay of 120mm and line length of 10mm

Press 'add line'. The pattern window will flash '5', the delay LED will light and the main display will show the next available position for a glue line.



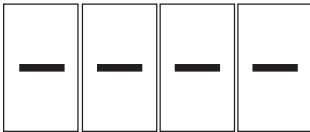
Press 'decrease' until



and the pattern window is flashing '3'.

Note : When decreasing the delay value through an existing pattern, the value will jump through any existing lines to prevent a new line being placed on top of an existing line.

Press 'add line'. The pattern window will flash '3', the line LED will light and the main display will show - - - -.



Press 'increase' until



Press 'pattern change/accept'.

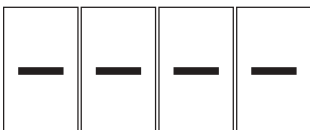
5.6 To remove a line from an existing pattern

Example : Remove the line which you have inserted in 5.5 above which is 120mm delay, 10mm line length. This is now the line number 3 of the pattern.

Press 'pattern inspect/enter' until line 3 is selected.



Press 'decrease' until



Press 'pattern inspect/enter'. This will delete the line and its associated delay and will renumber the rest of the lines in the pattern.

Note : When inserting or removing a line from a pattern, the following should happen :

- a) Line number identifications will be rescheduled
- b) If a line has been converted to spotting mode, that line will remain as spots even if other lines are inserted or deleted.

6. Enter adhesive pressure control settings

Two separate, automatically-variable adhesive control signals are available, 'pressure 1' and 'pressure 2'. These allow for individual control of 2 independent glue regulators to maintain a constant volume of glue as the machine speed changes from inch speed (standoff) to production speed (slope).

The standoff and slope are percentage values of the maximum glue line pressure available, usually 80psi (5.5 bar). These settings are usually made when the machine is running and producing product.

The pressure control signal is dependent on the msd which is assigned to it.

The msd can also be assigned to other channels, as well as the other pressure control. Therefore changing values of standoff or slope may also affect other channels.

Standoff - This adjusts the minimum pressure that the glue will drop to, even when the machine is stationary. It can also be used as a manual adjustment of glue pressure. Standoff pressure will be dependent on the type of glue gun and viscosity of glue used.

Slope- This controls the glue pressure as the machine speed changes and must be set with the machine running at production speed. Once set, the glue pressure will automatically change as the machine speed changes.

Example : To use only one glue regulation system proceed as shown in the following example.

Connect signal cable from glue regulator unit into pressure socket number 1.

Press 'pressure no. 1'. Msd LED will light for pressure no 1 and the main display will show which msd (1 or 2) is assigned to this pressure control.

Press 'increase' or 'decrease' to change msd selected.

The INFORMATION display allows you to see which other channels are connected to this pressure control and will therefore be affected by any change to standoff or slope.

Information display

Assigned
Chs XXXX

Run machine at inch speed

Press 'pressure no.1'. Standoff LED will light and a value will be displayed in the main window.

Use 'increase' and 'decrease' to set required value of standoff.



Example: standoff 25

Information display



Run machine at production speed.

Press 'pressure no.1'. Slope LED will light and a value will appear in the main window.

Press 'increase' or 'decrease' to set exact value whilst looking at the actual volume of glue laid down on the product.



Example: slope 43

To modify values for standoff and slope press 'pressure no.1' until the relevant LED is illuminated, then press 'increase' or 'decrease' to adjust.

Pressure control number 2 is set in exactly the same way and can either use the same msd input as pressure number 1 or another msd input. Pressure no. 2 is only used when a second glue regulator unit is used.

7. Purging or Testing (continuous output to guns)

To purge or prime the glue system it is important to be able to let the adhesive flow continuously through the gun. To achieve this a continuous hold output is required.

Determine which gun is to be purged/primed

Select the channel which operates the gun

Press 'select channel'. Example



OR

To Continue
Press MEMORY

Press 'memory'. The INFORMATION display will again offer two options which will alternate on the screen as follows :

To write to Page
Press PATTERN

OR

To exit Memory
Press MEMORY

Press 'pattern inspect/enter'. This action will store the channel's pattern on page 15 of the memory.

Note : Any existing information stored on page 15 is deleted when over writing i.e. only the last memory input can be recalled.

9.2 To recall a pattern

Press 'select channel' until the required channel is shown.

Press 'memory'. The INFORMATION display will ask the following question :

Select Memory
Page Number:

Press 'increase' or 'decrease' to select page number 15.

15

Press 'memory'. The INFORMATION display will offer two options which alternate on the screen as follows :

To read the Page
Press PATTERN

OR

To Continue
Press MEMORY

Press 'pattern inspect/enter'. This action will read the channel pattern as stored on page 15 to the current channel.

Note : The pattern information is not removed from page 15 by this action so it is possible to access the memory page again to write it to other channels.

10. Production Information

The following information is available for each channel :

- speed
- workrate
- total count

10.1 Speed m/min.

The INFORMATION screen displays this information as a default screen along with msd and trigger numbers assigned to that channel.

SPEED	0000m/min
Msd Nb1	Trig Nb2

10.2 Workrate units/hour.

The INFORMATION screen displays the number of pieces per hour.

Press 'production information'.
Response

Workrate	Ch1
2500/hour	

10.3.Total count.

The INFORMATION screen displays the total number of pieces glued since the value was cleared.

Press 'production information'. Response

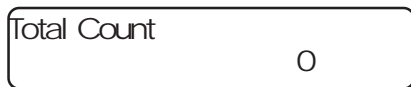
Total Count	57000
-------------	-------

Press 'production information'. Response

To reset total Press decrease	600-
----------------------------------	------

To ignore, press 'production information'. The INFORMATION screen will cycle back to Speed.

To reset, press 'decrease'. Response



11. Hidden Constants

The following settings are known as 'hidden constants' and must be set for each channel to suit the guns used and the application requirements for each channel. They are not available in the normal programming mode as they are considered to be a one-off setting which would normally be carried out by the engineer on installation or before the controller leaves the manufacturer.

HOLD VOLTAGE
HIGH VOLTS TIME
AUTO SPOTTING
TIP SEALER NUMBER 1 CONTROL : INHIBIT AND DWELL TIME
TIP SEALER NUMBER 2 CONTROL : INHIBIT AND DWELL TIME
RS485 ADDRESS
SOFTWARE VERSION REGISTER

11.1 To access hidden constants

Turn controller off.

Press 'pressure no.1' and 'pressure no.2' buttons simultaneously and hold on whilst turning on the controller.

The display will show :



followed by



Release the two buttons.

Press 'data lock' to allow the settings to be accessed.

11.2 To set hold voltage



Hold voltage is the voltage that keeps a gun open once initiated. This value is dependent on the gun being used.

Press 'select channel' to select the required channel.

Press 'decrease' or 'increase' to set 5V or 10V.

Series 86, 87, 88, 22	10v
Series 93	5v

Repeat setting for all other channels.

11.3 To set High Voltage Time

Press 'constants' button.

High Volt Time	
Ch1	10.0ms

High volt time : This value represents the duration of the 33V spike and is adjustable in milliseconds between 0.1ms and 50.0ms in steps of 0.1ms. This value is dependent on the gun being used.

Press 'select channel' until the correct channel you want to set is displayed.

Press 'decrease' or 'increase' to set the 'high volt time' required.

Series 86, 87, 88	10.0ms
Series 93	1.0ms
Series 22	3.0ms

Repeat setting for all other channels.

11.4 To set Auto-Spotting speed

Press 'constants' button.

Auto Spotting	
Ch1	< 1m/min

Auto Spotting is a value in metres/min. below which the output of the channel is converted into spotting mode. The spotting values are taken from the spot pitch and spot time values set in the normal constants display.

Press 'select channel' until the correct channel you want to set is displayed.

Press 'decrease' or 'increase' to set the required change over speed. To switch this function off, set the value to 1 m/min.

Repeat for all other channels as required.

11.5 To set Tip sealer inhibit time

Press 'constants' button.

Tip Sealer No 1
Inhibit 0.1ms

'Tip sealer inhibit time' represents a value in milliseconds adjustable between 0.1ms and 50.0ms which inhibits any output from the channel during the time set. This allows the tip sealer to complete its stroke before the gun fires.

Press 'decrease' or 'increase' to set the required time value.

Repeat for all other channels as required.

11.6 To set Tip sealer dwell time

Press 'constants' button.

Tip Sealer No 1
Dwell 1 sec

Tip sealer dwell time is a value in seconds adjustable between 1 and 99 seconds. The timing starts from a trigger input for the channel. The tip sealer will remain open as long as a new trigger input is accepted during the time set. If a trigger is not received the tip sealer will close.

Press 'decrease' or 'increase' to set the required time value.

Repeat for all other channels as required.

Press 'constants' button to move to tip sealer 2 and repeat the procedure for all channels.

11.7 To inspect the external communication link

Press 'constants' button.

RS 485 Address
MPC 1

This function is not used on the standard MPC.

To inspect the software version number

Press 'constants' button. Response

8051 Ver : X.XX
C167 Ver : X.XX

This is an information screen only and is a reference for the manufacturer.

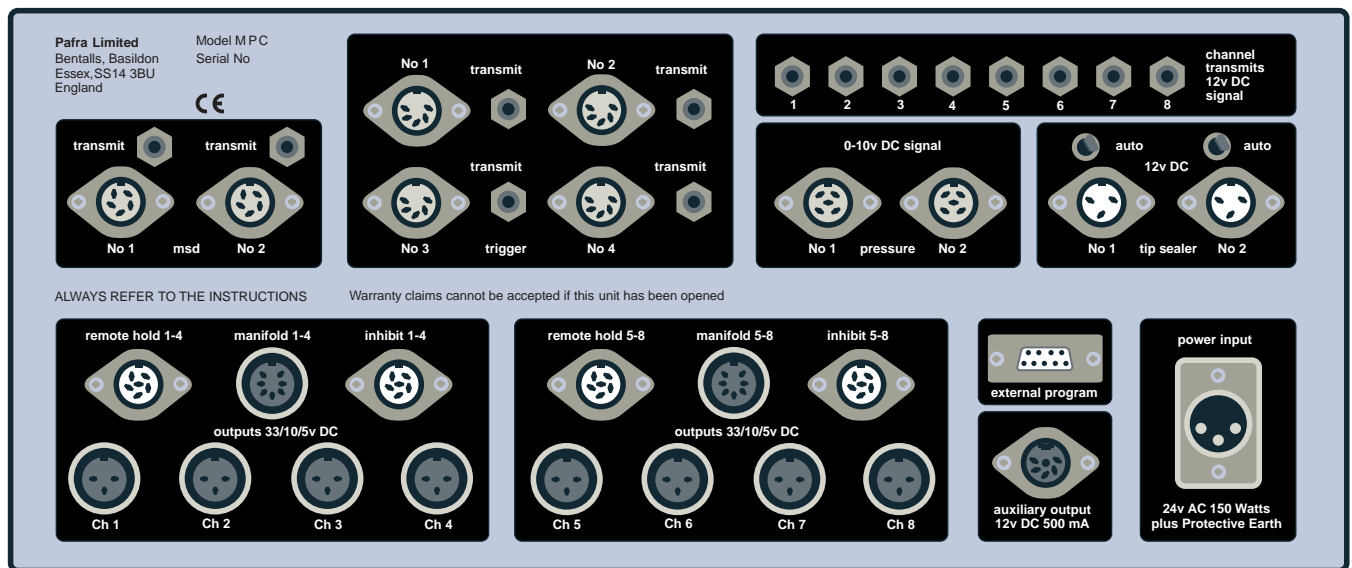
Press 'constants' button to index back to 'hold voltage'.

This completes the setting of 'hidden constants'.



Turn off controller to memorise inputs.

Rear Panel



Msd input and transmit

Allows for the input of two msd devices (if required) and gives the ability via transmit to use the pulses on another unit.

Trigger input and transmit

Allows for the input of four trigger devices (if required) and gives the ability via transmit to use the signals on another unit.

Channel Transmits

This gives the ability to output a 12VDC signal of the channel pattern. This signal information can be used for a number of functions including channel output boosting.

Pressure signal output

A variable 0-10VDC signal output of pressure to be connected to 1 or 2 glue regulator units.

Tip sealer signal output

An output of 12VDC which controls the tip sealer device.

Note : When the auto switch is switched off the output is continuous 12VDC so the tip sealer moves out.

Channel outputs

Outputs : output sockets for channels 1-4 or 5-8

Remote hold : gives the ability to connect a remote hold box to operate all four channels individually and remotely (for use when purging, priming or testing).

Manifold 1-4 : will allow through one lead output information of all four channels.

Inhibit 1-4 : for the connection of an external device such as a relay or micro switch to inhibit selected channel output.

External program

The connection for the RS485 interface.

Auxiliary Output

A continuous 12VDC 500 mA output to drive tip sealer or level detector controls.

Power Input

Power input socket. Power supplied via a Pafra TR150 transformer.